

ABSTRACT

Plastic injection-compression multi-cavity molding of flash-free improved-cleanliness thermoplastic spectacle lenses (16) are suitable to be robotically dip hardcoated. Special spring-loaded (25, 26) molds 5 having variable-volume mold cavities are used in an injection-compression molding process to form, without parting line flash, pairs of a wide range of differing optical power of polycarbonate Rx spectacle lenses (16). These pairs have special molded-on design features which are specially suited for full automation, starting with a novel way for 10 ejection out of the mold into a takeout robot which is integrated via full automation with subsequent dip hardcoating. A molded-on tab with each pair of lenses is specially suited for manipulation by SCARA type robot. This combination produces micro-clean hardcoated paired molded lens made entirely within a single continuous cleanroom air enclosure 15 surrounding the lenses, without any human operators therein, nor requiring any cutting or trimming of the molded paired lens or runner system before hardcoating, nor use of Freon (tm) CFC nor aqueous cleaning protocols before dipcoating.

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